Serial No.: 10/767,587

Amendment in Reply to Official Action dated 04/07/2006

Amendments to the Specification:

Please replace paragraph [00035] with the following amended paragraph:

[00035] In a conventional flexible joint using a bellows, the inner annular cavity is

typically filled with a non-corrosive glycol-based fluid, such as an aqueous propolyene

propylene glycol solution. At high temperatures, however, propolyene propylene glycol slowly

breaks down to acid. For high temperature operation, a polyalkylene glycol solution is preferred,

such as Union Carbide UCON brand heat transfer fluid No. 500.

Please replace paragraph [00037] with the following amended paragraph:

[00037] In order to further reduce the flow of heat from the production fluid to the

elastomeric flex element 25, the upper portion 26 of the extension 23 and also the bellows 29 can

be made of low heat conductivity metal such as nickel-chromium-iron alloy. The preferred

nickel-chromium-iron alloy is Inconel brand alloy, which contains a minimum of 72% nickel and

cobalt, 14-17% chromium, and 6-10% iron, such as 76% nickel, 17% chromium, and 7%

iron. For example, a weld 38 attaches the Inconel alloy upper portion 26 of the pipe extension 23

to the lower portion [[37]] 20 made of ASTM A707 steel.

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Serial No.: 10/767,587

Amendment in Reply to Official Action dated 04/07/2006

Please replace paragraph [00045] with the following amended paragraph:

[00045] FIG. 7 shows the alternate elastomer layers 71, 73, [[75]] 76, 78 and steel

reinforcing layers 72, 74, 75, 77 of the elastomeric flex element 25. The elastomer layer 71 is

the layer that is bonded to the semispherical upper portion (26 in FIG. 3) of the extension pipe,

and the elastomer layer 78 is the layer that is bonded to the seat (27 in FIG. 3) of the body.

Therefore, when conveying high temperature production fluid in a subsea environment, there

will be a temperature gradient across the elastomeric flex element 25. The elastomer layer 71

will have the highest temperature, and the elastomer layer 78 will have the lowest temperature.

This temperature gradient is non-uniform, such that the higher temperatures are concentrated in

the first few inner elastomer layers 71, 73. The increased temperature reduces the modulus of

the elastomer, and the reduced modulus reduces internal stress and extends fatigue life.

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